

805 KAR 1:140. Directional and horizontal wells.

RELATES TO: KRS 353.050, 353.060, 353.180, 353.510, 353.520, 353.561 – 353.564, 353.590, 353.5901, 353.592, 353.610, 353.651, 353.652, 353.6601 – 353.6606, 353.730, 353.737, 353.991, Chapter 424

STATUTORY AUTHORITY: KRS 353.540, 353.550

NECESSITY, FUNCTION, AND CONFORMITY: KRS 353.540 authorizes the department to promulgate administrative regulations to administer KRS 353.500 to 353.720. KRS 353.550 authorizes the department to regulate the drilling and casing of all wells and filing of all down-hole surveys. This administrative regulation establishes the requirements for permitting directional and horizontal wells for the purpose of oil or gas extraction.

Section 1. Definitions. (1) "Blow-out preventer" or "BOP" means a device installed on the surface casing, which is the first and largest diameter casing installed in a well with the primary use to make the bore hole stand up and to protect a fresh water zone layer of strata capable of producing or receiving fluids, or installed on the intermediate casing, which is one (1) or more strings of pipes installed in a well in addition to the surface casing in which each string is smaller in diameter than the previous. The device is used to prevent the escape of pressure either in the annulus, which is the space between two (2) strings of casing or between a string of casing and the bore hole wall, between casing and drill pipe, or in the open hole without drill pipe, and that is used during drilling operations.

(2) "Casing" is defined by KRS 353.010(3).

(3) "Deep well" is defined by KRS 353.510(16).

(4) "Directional survey" is defined by KRS 353.010(8).

(5) "Intersection length" means the horizontal distance between the point at which the well penetrates the top of the intended formation and the end point within that formation.

(6) "True vertical depth" means the depth of the well from any point in the well being measured to the surface of the ground above the point being measured.

Section 2. Information Submittal. (1) Prior to drilling a directional or horizontal well, the operator shall submit:

(a) An Application for Permit, ED 1, for a permit to drill the well, with a cover letter from the operator making a request for drilling the horizontal or directional well;

(b) Three (3) copies of a location plat satisfying the requirements of 805 KAR 1:030 (plan view), in addition to:

1. The surface location and proposed target formation with their respective Carter Coordinates;

2. The proposed course of the well; and

3. The identification of the intersection length of the proposed well and the proposed producing formation. To avoid any conflicts with the spacing requirements, a dashed line shall be drawn around the intersection length with regard to the spacing requirements in KRS 353.610 or, for deep wells, 805 KAR 1:100 and KRS 353.651 and 353.652. This distance shall be clearly shown in feet;

(c) A bond as required in KRS 353.590(7); and

(d) An application fee of \$300.

(2)(a) In addition to the plan view required in this section, the operator shall submit three (3) copies of a plat that shows a vertical cross-section view of the area to be drilled by the well.

(b) This cross-section shall be prepared from the proposed "predrill hole" directional survey compiled by the contractor responsible for the directional control mechanism and certified as

required by 805 KAR 1:030, Sections 2 and 7(1)(k).

(c) The cross-section shall include the area from the well site to the target made through the proposed course of the well.

(d) The surface shall be located as zero in reference to the depth and the lateral distance from the well site and true vertical depths shall be shown for:

1. The kick-off point or selected depth at which the deviation is started;
2. The known coal seams to be intersected;
3. The producing interval;
4. The proposed producing formation; and
5. The proposed target.

(3) Upon permit issuance, the operator shall provide verbal or written notice to the department field inspector at least forty-eight (48) hours in advance of the commencement of drilling operations.

(4) Once the well has been drilled and completed, the following shall be submitted within thirty (30) days from the date of completion:

(a) Three (3) copies of an amended plan view of the well location plat required in subsection (1)(b)1. through 3. of this section, with the actual course drilled, the kick-off point, and the actual target superimposed on the proposed well location plat. A correction in the target Carter Coordinates, if necessary, shall then be issued by the department;

(b) Three (3) copies of the side or cross-sectional view plat required in subsection (2)(d)1 through 5 of this section of this section shall be amended for the actual path of the well, showing the actual formation, coal seams, target, kick-off point; and

(c) Copies of all directional surveys certified by the operator and the contractor responsible for the directional survey.

1. This survey shall be submitted for the entire well bore, and the operator shall be able to identify the path or depth of the well bore at any given time during and after the drilling of the directional or horizontal well.

2. The survey points shall be made at 200 feet intervals or at any intervals more frequent.

(5) The operator shall satisfy spacing requirements in accordance with KRS 353.610 or, for deep wells, 805 KAR 1:100 and KRS 353.651 and 353.652, of offset mineral boundary lines and between wells for the actual drilled course of the well and its end point and the intersection of the well bore and the producing formations.

(6) A coal operator or owner affected by the drilling of a directional or a horizontal well shall be provided a copy of the predrill plat and cross-section plat established in subsections (1)(b) and (2)(b) of this section of this section as required by KRS 353.050 and 353.060. Within ten (10) days after the well is drilled, the operator shall submit to the coal operator or owner the revised plats and deviation survey log required in subsection (4) of this section.

(7) The requirements for a deep directional or horizontal well shall satisfy those requirements established in 805 KAR 1:100 and KRS 353.651 and 353.652 regarding the application process and spacing units. Prior to the deep directional or horizontal well being drilled, a hearing shall be held pursuant to KRS Chapter 13B and 805 KAR 1:100 before the Kentucky Oil and Gas Conservation Commission.

Section 3. If an application for a directional or horizontal permit is submitted to the department, the operator shall prepare a detailed drilling and casing plan on Casing and Cementing Plan, Form ED-7, for the review by and the approval or denial of the department. The items requested in 805 KAR 1:130, Section 3(1), (2), and (3) shall be submitted with this plan.

Section 4. The operator shall install a blow-out prevention device capable of withstanding a

working pressure of 1,500 psi and a test pressure of 3,000 psi.

(1) A description of this device and its installation shall be included with the drilling and casing plan required in Section 3 of this administrative regulation.

(2) This BOP equipment shall be tested at intervals necessary to maintain its ability to operate at rated capacity. The results of these tests shall be kept at the drill site and made available to department personnel at their request.

Section 5. The requirements of 805 KAR 1:130, Sections 5, 6, and 7 shall also apply to this administrative regulation.

Section 6. An operator in noncompliance with the requirements of this administrative regulation shall be subject to penalties pursuant to KRS 353.991.

Section 7. Incorporation by Reference. (1) The following material is incorporated by reference:

(a) "Application for Permit", ED 1, June 2004; and

(b) "Casing and Cementing Plan", ED-7, March 2015.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Oil and Gas Conservation, 300 Sower Boulevard, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. to 4:30 p.m. (18 Ky.R. 236; Am. 1023; eff. 9-25-1991; TAm eff. 8-9-2007; 36 Ky.R. 190; 787; eff. 10-23-2009; eff. 9-4-2015, TAm eff. 7-6-2016.)